

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 7/02/2013

| | |
|----------------|---------------------|
| Control | 0069-01-052 |
| Project | NH 2013(488) |
| Highway | US 87 |
| County | HOWARD |

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: NH 2013(488)

CONTROL: 0069-01-052

COUNTY: HOWARD

LETTING: 07/09/2013

REFERENCE NO: 0702

PROPOSAL ADDENDUMS

_ PROPOSAL COVER

X BID INSERTS (SH. NO.: 1-4, 4-4)

X GENERAL NOTES (SH. NO.: D)

_ SPEC LIST (SH. NO.:)

_ SPECIAL PROVISIONS:

ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

X OTHER: See changes outlined below.

DESCRIPTION OF ABOVE CHANGES

(INCLUDING PLANS SHEET CHANGES)

Bid Inserts:

Sheet 1-4: Item 316-2221 quantity change.

Sheet 4-4: Item 318-2162 quantity change.

Item 318-2409 quantity change.

General Notes:

Sheet D: revised note to item 134.

Plan Set:

The following sheets are replaced:

10, 13, 14

| ALT | ITEM-CODE | | | UNIT BID PRICE ONLY. WRITTEN IN WORDS | UNIT | APPROX QUANTITIES | DEPT USE ONLY |
|-----|------------|--------------|-------------|--|------|----------------------|---------------------|
| | ITEM NO | DESC CODE | S.P. NO. | | | | |
| | 134 | 2001 | | BACKFILL (TY A) DOLLARS CENTS and | STA | 115.630 | 1 |
| 1 | 316 | 2006 | 016 | ASPH (AC-20-5TR) DOLLARS CENTS and | GAL | 49,183.000 | 2 |
| 1 | 316 | 2221 | 016 | AGGR(TY-PB GR-3 SAC-B) DOLLARS CENTS and | CY | 1,233.000 | 3 |
| | 354 | 2041 | | PLANE ASPH CONC PAV (1.5") DOLLARS CENTS and | SY | 369.000 | 4 |
| | 354 | 2045 | | PLANE ASPH CONC PAV (2") DOLLARS CENTS and | SY | 6,687.000 | 5 |
| | 354 | 2051 | | PLANE ASPH CONC PAV (0" TO 1 1/2") DOLLARS CENTS and | SY | 1,962.000 | 6 |
| | 450 | 2155 | 001 | RAIL (TY T223)(RETROFIT) DOLLARS CENTS and | LF | 604.000 | 7 |
| | 452 | 2007 | | REMOVE RAIL (TY 6) DOLLARS CENTS and | LF | 300.000 | 8 |
| | 500 | 2001 | 011 | MOBILIZATION DOLLARS CENTS and | LS | 1.000 | 9 |
| | 502 | 2001 | 033 | BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS CENTS and | MO | 4.000 | 10 |

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|-----|------------|--------------|-------------|---|------|----------------------|---------------------|
| | ITEM NO | DESC CODE | S.P. NO. | | | | |
| | 540 | 2001 | 031 | MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS | LF | 4,375.000 | 11 |
| | 540 | 2011 | 031 | MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS | EA | 4.000 | 12 |
| | 540 | 2015 | 031 | MTL W-BEAM GD FEN(TIM POST)RADIUS RAIL DOLLARS and CENTS | LF | 25.000 | 13 |
| | 540 | 2036 | 031 | DRIVEWAY TERMINAL ANCHOR SECTION DOLLARS and CENTS | EA | 1.000 | 14 |
| | 540 | 2044 | 031 | DOWNSTREAM ANCHOR TERMI- NAL(DAT)SECTION DOLLARS and CENTS | EA | 8.000 | 15 |
| | 540 | 2046 | 031 | MTL BM GD FEN TRANS (NON-SYM) DOLLARS and CENTS | EA | 4.000 | 16 |
| | 542 | 2002 | | REMOVING TERMINAL ANCHOR SECTION DOLLARS and CENTS | EA | 16.000 | 17 |
| | 544 | 2003 | | GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS | EA | 2.000 | 18 |
| | 544 | 2004 | | GDRAIL END TRT(INST)(WOOD POST)(TY I) DOLLARS and CENTS | EA | 16.000 | 19 |
| | 658 | 2241 | | INSTL DEL ASSM (D-SW)SZ 1(FLX)GF2(BI) DOLLARS and CENTS | EA | 46.000 | 20 |

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|-----|------------|--------------|-------------|--|------|----------------------|---------------------|
| | ITEM NO | DESC CODE | S.P. NO. | | | | |
| | 658 | 2259 | | INSTL DEL ASSM (D-SW)SZ (TYC)CTB(BI) DOLLARS and CENTS | EA | 6.000 | 21 |
| | 662 | 2113 | | WK ZN PAV MRK SHT TERM (TAB) TY W DOLLARS and CENTS | EA | 2,586.000 | 22 |
| | 662 | 2114 | | WK ZN PAV MRK SHT TERM (TAB) TY Y DOLLARS and CENTS | EA | 4,524.000 | 23 |
| | 666 | 2036 | | REFL PAV MRK TY I (W) 8" (SLD)(100MIL) DOLLARS and CENTS | LF | 803.000 | 24 |
| | 666 | 2042 | | REFL PAV MRK TY I (W) 12"(SLD)(100MIL) DOLLARS and CENTS | LF | 180.000 | 25 |
| | 666 | 2048 | | REFL PAV MRK TY I (W) 24"(SLD)(100MIL) DOLLARS and CENTS | LF | 74.000 | 26 |
| | 666 | 2054 | | REFL PAV MRK TY I (W) (ARROW) (100MIL) DOLLARS and CENTS | EA | 5.000 | 27 |
| | 666 | 2096 | | REFL PAV MRK TY I (W) (WORD) (100MIL) DOLLARS and CENTS | EA | 5.000 | 28 |
| | 666 | 2102 | | REF PAV MRK TY I(W)36"(YLD TRI)(100MIL) DOLLARS and CENTS | EA | 23.000 | 29 |
| | 672 | 2012 | 034 | REFL PAV MRKR TY I-C DOLLARS and CENTS | EA | 324.000 | 30 |
| | 672 | 2015 | 034 | REFL PAV MRKR TY II-A-A DOLLARS and CENTS | EA | 648.000 | 31 |

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|-----|------------|--------------|-------------|---|------|----------------------|---------------------|
| | ITEM NO | DESC CODE | S.P. NO. | | | | |
| | 3270 | 2120 | | SUPERPAVE MIXTURES SP-D SAC-B PG70-22 DOLLARS and CENTS | TON | 10,642.000 | 32 |
| | 8251 | 2003 | 005 | RE PM W/RET REQ TY I(W)4"(BRK)(100MIL) DOLLARS and CENTS | LF | 6,460.000 | 33 |
| | 8251 | 2006 | 005 | RE PM W/RET REQ TY I(W)4"(SLD)(100MIL) DOLLARS and CENTS | LF | 25,832.000 | 34 |
| | 8251 | 2015 | 005 | RE PM W/RET REQ TY I(Y)4"(BRK)(100MIL) DOLLARS and CENTS | LF | 6,460.000 | 35 |
| | 8251 | 2018 | 005 | RE PM W/RET REQ TY I(Y)4"(SLD)(100MIL) DOLLARS and CENTS | LF | 25,832.000 | 36 |
| | | | | ALTERNATE NO. 1A DOLLARS and CENTS | | | |
| | 318 | 2162 | 010 | AGGR(TY-PB GR-3 SAC-B) DOLLARS and CENTS | CY | 1,301.000 | 37 |
| | 318 | 2409 | 010 | A-R BINDER (TYPE II) DOLLARS and CENTS | GAL | 53,868.000 | 38 |

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ABILENE DISTRICT GENERAL NOTES 2004 SPECIFICATIONS

General

Cut neat, straight lines with vertical faces along pavement edges or along joints between existing asphalt or concrete pavement and new pavement perpendicular or parallel to the direction of traffic by methods described in applicable bid items, or as directed. Provide clean edges or joints without jagged appearance or chunks broken out. This work is considered subsidiary to various bid items.

All known utilities are identified in the plans, including the crossing of power lines. Use this information to identify potential issues with power poles and power lines prior to bidding. Make necessary arrangements with utility owners regarding temporary protections such as bracing power poles, and de-energizing power lines. The Department will not reimburse the cost of such temporary protections to the Contractor, unless the Engineer determines that inadequate information was available at the time the project was bid.

Item 5, "Control of Work"

Prior to contract letting, bidders may obtain a free computer diskette or a computerized transfer of files (from the Engineer's office) that contains the earthwork information. If copies of the actual cross-sections in addition to, or instead of, the diskette are requested, they will be available at the Engineer's office for borrowing by copying companies for the purpose of making copies for the bidder at the bidders expense.

All known utilities are identified in the plans, including the crossing of power lines. Use this information to identify potential issues with power poles and power lines prior to bidding. Make necessary arrangements with utility owners regarding temporary protections such as bracing power poles, and de-energizing power lines. The Department will not reimburse the cost of such temporary protections to the Contractor, unless the Engineer determines that inadequate information was available at the time the project was bid.

Provide notification to the District Signal Shop by telephone at 325-676-6981 and by fax at 325-676-6986 when planning drilling or excavation work in areas where existing TxDOT underground utilities exist. Visual evidence of TxDOT underground utilities in the area include illumination poles, ground boxes, flashing beacons, traffic signals, etc. This notification must be provided 48 hours in advance of performing the work, but no earlier than 72 hours before the work will commence. Drilled shaft locations or excavation areas must be staked prior to the notification so that the underground utilities can be located in relationship to the proposed work. Preserve and document the marked utility locations to prevent unnecessary secondary notifications. Secondary notifications that are due to failure to preserve and document previously marked utilities will be responded to at a cost of \$500 each and will be deducted from the next payment. Notify the Engineer of conflicts between proposed work and underground utilities. Repair damaged TxDOT utilities in accordance with current electrical regulations, or as directed by the Engineer when damage is due to failure to provide notification to the District

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Signal Shop or failure to notify the Engineer of conflicts between proposed work and underground utilities. Repair work for these reasons will be performed at the Contractor's

expense unless documentation is available to demonstrate otherwise as determined by the Engineer.

Item 7, "Legal Relations and Responsibilities"

Provide access to all businesses and residences with minimum disruption and as directed.

Materials, labor, and maintenance for these temporary accesses is considered subsidiary to the various bid items.

Do not initiate activities in a project specific location (PSL), associated with a U.S. Army Corps of Engineers (USACE) permit area that has not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Associated defined here means materials are delivered to or from the PSL. The permit area includes all waters of the U.S. or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. Be responsible for any and all consultations with the USACE regarding activities, including project specific locations (PSLs) that have not been previously evaluated by the USACE. Provide the department with a copy of all consultation(s) or approval(s) from the USACE prior to initiating activities.

The contractor may proceed with activities in PSLs that do not affect a USACE permit area if a self determination has been made that the PSL is non-jurisdictional or proper USACE clearances have been obtained in jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. The contractor is solely responsible for documenting any determination(s) that their activities do not affect a USACE permit area. Maintain copies of their determination(s) for review by the department or any regulatory agency.

Document and coordinate with the USACE, if required, prior to any excavation hauled from or embankment hauled into a USACE permit area by either (1) or (2) below.

(1) Restricted Use of Materials for the Previously Evaluated Permit Areas.

Document both the project specific location (PSL) and their authorization. Maintain copies for review by the department or any regulatory agency. When an area within the project limits has been evaluated by the USACE as part of the permit process for this project:

- a. Suitable excavation of required material in the areas shown on the plans and cross sections as specified in Item 110 is used for permanent or temporary fill (Item 132, Embankment) within a USACE permit area;
- b. Suitable embankment (Item 132) from within the USACE permit area is used as fill within a USACE evaluated area; and,
- c. Unsuitable excavation or excess excavation ["Waste"] (Item 110) that is disposed of at a location approved by the Engineer within a USACE evaluated area.

(2) Contractor Materials from Areas Other than Previously Evaluated Areas.

Provide the department with a copy of all USACE coordination or approval(s) prior to initiating any activities for an area within the project limits that has not been

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(3) evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:

- a. Item 132, Embankment, used for temporary or permanent fill within a USACE permit area; and,
- b. Unsuitable excavation or excess excavation ["Waste"] (Item 110, Excavation) that is disposed of outside a USACE evaluated area.

The total area disturbed for this project is 0 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the ROW to the Engineer and to the government that operates a separate storm sewer system.

The Contractor's attention is directed to the Texas Aggregate Quarry Pit Safety Act. Any pit or quarry meeting the definition of an unacceptable unsafe location as defined in the Act is subject to regulations set forth in this Act. A copy of the Texas Administrative Code, Title 43, Part, 1, Chapter 21, Subchapter M may be viewed at [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC).

The Contractor's attention is directed to potential regulations against burning within the project limits. Abide by all local ordinances and county imposed burn bans. When burning is prohibited, dispose of material in accordance with regulations set forth by other regulatory agencies including the Texas Commission for Environmental Quality. The cost of burning or disposal of any product is subsidiary to various bid items.

Item 8 "Prosecution and Progress"

Each contract awarded by the Department stands on its own and as such, is separate from other contracts. A Contractor awarded multiple contracts must be capable and sufficiently staffed to concurrently process and/or execute all contracts at the same time.

Working days will be computed and charged in accordance with Section 8.3.A.4 except that time will not be charged during vegetative establishment, maintenance, performance and test periods when all other work has been satisfactorily completed.

Item 134, "Backfilling"

Backfill pavement edges no later than 2 weeks after the construction of the final surface.

Apply emulsion at a 50/50 of water to emulsion; emulsion rate = 0.15 gal/sy residual emulsion.

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800 CY of department owned RAP, stockpiled at The intersection of SH 350 & FM 700 approximately 6.4 miles from the North end of the project, is available for use for this project.

Item 302, “Aggregates for Surface Treatments”

The Engineer reserves the right to test all sources even if the source is listed in the Bituminous Source Rated Quality Catalog.

Furnish aggregate for final surfaces with a minimum surface aggregate classification of “B”.

Flakiness index for aggregates will not be required on this project.

Provide subsurface aggregates with a maximum magnesium sulfate soundness loss value of 30%.

Item 316, “Surface Treatments”

Unless authorized in writing by the Engineer, the open season for the application of asphalt is May 15 to September 1.

Typical Lane Closure Work Area length will be 2 miles unless otherwise directed by the Area Engineer.

Seal driveways, mailbox turnouts, and intersections prior to sealing the roadway, unless otherwise approved.

Remove excess aggregate from curb and gutter sections, bridge rail, rip rap slopes and other areas as directed with a street sweeper or other method approved by the Area Engineer.

Remove paper and other debris on the same day of operations.

Furnish two medium pneumatic-tire rollers in accordance with item 210, “Rolling”.

Provide pre-coat aggregate with **PG 64-16** or as approved by the Engineer.

Cover or protect any sealed expansion joints or rail on bridges and any railroad tracks encountered on this project, as directed by the Engineer. Clean any of these items not properly protected. This work will not be paid for directly but will be considered subsidiary to Item 316.

For items of work that include both Summer and Winter materials, the Engineer will determine which asphalt to apply based on timing and prevailing weather conditions.

Item 318, “Hot Asphalt-Rubber Surface Treatments”

Unless authorized in writing by the Engineer, the open season for the application of asphalt is May 15 to September 1.

Use type II asphalt rubber binder and grade B crumb rubber modifier in accordance with item 300.

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Typical Lane Closure Work Area length will be 2 miles unless otherwise directed by the Area Engineer.

Seal driveways, mailbox turnouts, and intersections prior to sealing the roadway, unless otherwise approved.

Remove excess aggregate from curb and gutter sections, bridge rail, rip rap slopes and other areas as directed with a street sweeper or other method approved by the Area Engineer.

Remove paper and other debris on the same day of operations.

Provide pre-coat aggregate with **PG 64-16**, or as approved by the Engineer.

Item 354, “Planning and Texturing Pavement”

Retain ownership of excess RAP and remove the unused material from the project site upon completion of the paving work.

Item 420, 427, “Concrete Structures” & “Surface Finishes for Concrete”

Provide a Surface Area 1 finish using an Adhesive Grout Coating or Rub Finish as directed.

Item 421, “Hydraulic Cement Concrete”

Use a cement meeting the requirements of Ty II when Mix Design Option 7 is selected for cast in place concrete.

Class C fly ash and Ty I cement will not be allowed for any mix unless approved by the Engineer.

Air Entrainment requirements are waived with exception to bridge deck concrete, and all slip formed concrete (bridge rail, concrete traffic barrier, pavement, etc.).

If the Contractor elects to use air entrainment in concrete when not required, the upper spec limit will not be waived.

For this project, the Engineer will provide strength-testing equipment for acceptance testing.

For this project, the Engineer will provide the curing facility.

Item 502, “Barricades, Signs and Traffic Handling”

Provide the Engineer with written notification seven (7) days in advance of major traffic changes. A major traffic change is defined as the temporary (greater than one day) or permanent relocation of traffic lanes typically in an urban setting. The notice will, at a minimum, include the expected date, time and scope of the traffic change. The Department will utilize the information provided to inform the traveling public of the changes. Failure to provide advance notice, or to provide accurate information, will result in delaying the work until such time that the public has been notified.

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Additional signs, barricades and traffic handling may be necessary to complete the work shown herein and will be provided by the contractor as required and will be considered subsidiary to this item.

When attenuators are utilized accordance with TCP Series 1, 2, or 5, provide separate attenuators for each work area within a common lane closure as approved or directed by the Engineer.

Provide to the Engineer a letter certifying that all truck-mounted attenuators (TMA) used on the project have proven to be crashworthy using the criteria outlined in the *National Cooperative Highway Research Program (NCHRP) Report 350*.

Relocate existing roadside signs to temporary supports as approved by the engineer.

All safety appurtenances such as signs, delineators, object markers and route markers will be in place prior to opening each phase of the construction to traffic, unless otherwise directed.

During construction on all underpass structures erect and maintain accurate clearance signs in accordance with the "Texas Manual on Uniform Traffic Control Device for Streets and Highways". The mounting method for the temporary clearance sign is subject to approval of the Engineer. Temporary clearance signs are considered subsidiary to the various bid items. Movement of construction equipment and haul trucks will be prohibited from crossing the median unless specifically authorized by the Engineer. Ingress and egress to main lanes will be at entrance and exit ramps.

The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

Item 504, "Facilities for Field Office and Laboratory"

Field Laboratory:

Furnish a "Type D" structure for the asphalt mix control laboratory for the Engineer's exclusive use. In addition to the requirements of Item 504, furniture and equipment to be furnished by the Contractor shall include:

- eye wash station
- first-aid kit
- two fire extinguishers

Asphalt content may be determined utilizing the ignition method.

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Provide a 240-volt electrical entrance service. The service will operate continuously and consist of a minimum of four 120-volt circuits with 20-amp breakers and no more than two grounded convenience outlets per circuit and provisions for a minimum of two 220-volt ovens with vents

to the outside. Have a minimum of two convenience outlets per wall (one of which is a "GFCI" outlet). Space heaters for heating are not acceptable. Portable structures should be support blocked for stability and tied down.

Item 540, "Metal Beam Guard Fence"

For metal beam guard fence, use round wood posts.

Steel posts for metal beam guard fence may be field cut to proper rail height with a power saw when approved by the engineer.

Core drill 1 ¼ diameter holes through existing slab. Percussion or impact drilling is not permitted. Patch spalls, when directed by the engineer, in accordance with item 429, "Concrete Structure Repair", at the contractor's expense.

Item 544, "Guardrail End treatments"

Drill pilot holes for lag bolts to attach SGT head to wood post, do not hammer lag bolts.

For roadways with shoulder widths two feet or less (non-curbed), place the SGT on a 25:1 taper as shown in the plans unless otherwise approved by the Engineer. For roadways with shoulder widths greater than two feet, place the SGT with no flair unless the Engineer approves a flair installation.

Item 585, "Ride Quality for Pavement Surfaces"

For localized roughness, diamond grinding is the preferred corrective method. However, the Engineer will minimize grinding to preserve the aesthetics of the final surface. Obtain approval

of locations prior to grinding. The method of mill and fill of short sections (<100 ft) to correct localized roughness will not be allowed.

For deficient 0.1 mile sections, excessive diamond grinding as a final texture is disallowed. Excessive diamond grinding will be defined by the Engineer. When required to perform corrective work, use mill and fill or other approved method that will preserve the aesthetics of the final surface. Minimal diamond grinding within 0.1 mile sections to improve the average IRI to less than 95 in. per mile will be allowed when approved.

Use pay adjustment schedule **2 (two)** for Ride Quality bonus/penalty calculation.

Item 658, "Delineator and Object Marker Assemblies"

Delineators and object marker assemblies will use winged channel posts. The winged channel posts will be 1.12 lb/ft and 6.5 ft in length.

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Place type "C" delineators on Metal Beam Guardfence and Rail at 100-ft spacing. Reduce spacing to provide a minimum of three delineators per run. Attach with Liquid Nails or equivalent to bridge rail and metal beam guard fence.

Item 662, "Work Zone Pavement Markings"

Place work zone pavement markings prior to the seal coat operation.

Dispose of tabs and paper in an approved trash receptacle. (Reference Standard **SW3P**, waste material)

Item 666, "Reflectorized Pavement Markings"

Provide a complete system of thermoplastic pavement markings at locations indicated on the plans and as directed. The plans are intended to show typical conditions, which can be extended throughout this project as approved or directed.

Establish a true and correct alignment with a method approved by the Engineer. This work will be considered subsidiary.

Item 3270, "Super Pave Mixtures"

Furnish aggregate for final surfaces with a minimum surface aggregate classification of "**B**".

Provide surface aggregates with a maximum magnesium sulfate soundness loss value of 25%.

Provide subsurface aggregates with a maximum magnesium sulfate soundness loss value of 30%.

The Engineer reserves the right to test all sources even if the source is listed in the Bituminous Source Rated Quality Catalog.

Provide the testing lab samples to calibrate the ignition oven no later than five (**5**) working days prior to mix design verification.

Design the mixture with $N_{des} = 75$ gyrations. The design number of gyrations may be increased from 75 to 100 when allowed by the Engineer.

Meet the minimum Hamburg Wheel Test requirements shown below:

- PG 64 or lower – 5,000 passes
- PG 70 – 10,000 passes
- PG 76 or higher – 20,000 passes

Provide a stone on stone contact aggregate gradation below the reference zone.

Dilution of tack coat is not allowed.

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Do not exceed a laydown width of 16' per pass.

RAP generated from this project is available for use.

Unfractionated RAP will not be allowed in surface mixtures.

Substitution of PG Binders will not be allowed except when the mix design includes RAP or RAS

Item 8251 “Reflectorized Pavement Markings with Retroreflective Requirements”

Provide a complete system of thermoplastic pavement markings at locations indicated on the plans and as directed. The plans are intended to show typical conditions, which can be extended throughout this project as approved or directed.

Establish a true and correct alignment with a method approved by the Engineer. This work will be considered subsidiary.

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